CONTAINS NO CBI

EPA

Form Approved
OMB No. 2010-0019
Approval Expires 12-31-89

EPA-OTS

0006225106

90-8900000406

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Comprehensive Assessment Information Rule

REPORTING FORM

89 JUL -6 AM 8:40
OTS CHEMICAL CONTROL OFFICE

When completed, send this form to:	For Agency Use Only:
Document Processing Center Office of Toxic Substances, TS-790 U.S. Environmental Protection Agency 401 M Street, SW Washington, DC 20460 Attention: CAIR Reporting Office	Date of Receipt: _____ Document Control Number: _____ Docket Number: _____

EPA Form 7710-52

SECTION 1 GENERAL MANUFACTURER, IMPORTER, AND PROCESSOR INFORMATION

PART A GENERAL REPORTING INFORMATION

1.01 This Comprehensive Assessment Information Rule (CAIR) Reporting Form has been completed in response to the Federal Register Notice of..... [1][2] [2][2] [8][8]
mo. day year

CBI

[ ] a. If a Chemical Abstracts Service Number (CAS No.) is provided in the Federal Register, list the CAS No. ..... [0][2][6][4][7][1]-[6][2]-[5]

b. If a chemical substance CAS No. is not provided in the Federal Register, list either (i) the chemical name, (ii) the mixture name, or (iii) the trade name of the chemical substance as provided in the Federal Register.

(i) Chemical name as listed in the rule ..... _____

(ii) Name of mixture as listed in the rule .... _____

(iii) Trade name as listed in the rule ..... _____

c. If a chemical category is provided in the Federal Register, report the name of the category as listed in the rule, the chemical substance CAS No. you are reporting on which falls under the listed category, and the chemical name of the substance you are reporting on which falls under the listed category.

Name of category as listed in the rule ..... _____

CAS No. of chemical substance ..... [ ][ ][ ][ ][ ][ ]-[ ][ ]-[ ]

Name of chemical substance ..... _____

1.02 Identify your reporting status under CAIR by circling the appropriate response(s).

CBI

Manufacturer 1

[ ] Importer 2

Processor ..... (3)

X/P manufacturer reporting for customer who is a processor 4

X/P processor reporting for customer who is a processor 5

[ ] Mark (X) this box if you attach a continuation sheet.

1.03 Does the substance you are reporting on have an "x/p" designation associated with it in the above-listed Federal Register Notice?

CBI

[ ]

Yes ..... [X] Go to question 1.04

No ..... [ ] Go to question 1.05

1.04 a. Do you manufacture, import, or process the listed substance and distribute it under a trade name(s) different than that listed in the Federal Register Notice? Circle the appropriate response.

CBI

[ ]

Yes 1

No ..... (2)

b. Check the appropriate box below:

[ ] You have chosen to notify your customers of their reporting obligations

Provide the trade name(s) .... _____

_____

[ ] You have chosen to report for your customers

[ ] You have submitted the trade name(s) to EPA one day after the effective date of the rule in the Federal Register Notice under which you are reporting.

1.05 If you buy a trade name product and are reporting because you were notified of your reporting requirements by your trade name supplier, provide that trade name.

CBI

[ ]

Trade name ..... Rubinate TDI

Is the trade name product a mixture? Circle the appropriate response.

Yes 1

No ..... (2)

1.06 Certification -- The person who is responsible for the completion of this form must sign the certification statement below:

CBI

[ ] "I hereby certify that, to the best of my knowledge and belief, all information entered on this form is complete and accurate."

T. J. Puette	Thomas J. Puette	6/29/89
NAME	SIGNATURE	DATE SIGNED

Director-Regulatory Affairs	(216) 344 - 8399
TITLE	TELEPHONE NO.

[ ] Mark (X) this box if you attach a continuation sheet.

1.07 Exemptions From Reporting -- If you have provided EPA or another Federal agency with the required information on a CAIR Reporting Form for the listed substance within the past 3 years, and this information is current, accurate, and complete for the time period specified in the rule, then sign the certification below. You are required to complete section 1 of this CAIR form and provide any information now required but not previously submitted. Provide a copy of any previous submissions along with your Section 1 submission.

CBI

[__]

"I hereby certify that, to the best of my knowledge and belief, all required information which I have not included in this CAIR Reporting Form has been submitted to EPA within the past 3 years and is current, accurate, and complete for the time period specified in the rule."

NAME	SIGNATURE	DATE SIGNED
TITLE	(_____) _____ - _____ TELEPHONE NO.	DATE OF PREVIOUS SUBMISSION

1.08 CBI Certification -- If you have asserted any CBI claims in this report you must certify that the following statements truthfully and accurately apply to all of those confidentiality claims which you have asserted.

CBI

[__]

"My company has taken measures to protect the confidentiality of the information, and it will continue to take these measures; the information is not, and has not been, reasonably ascertainable by other persons (other than government bodies) by using legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding) without my company's consent; the information is not publicly available elsewhere; and disclosure of the information would cause substantial harm to my company's competitive position."

NAME	SIGNATURE	DATE SIGNED
TITLE	(_____) _____ - _____ TELEPHONE NO.	

[__] Mark (X) this box if you attach a continuation sheet.

PART B CORPORATE DATA

1.09 Facility Identification

CBI Name [T][h][e][ ][G][l][i][d][d][e][n][ ][C][o][m][p][a][n][y][ ][ ][ ][ ][ ][ ][ ]

[ ] Address [3][0][0][ ][S][p][r][o][w][l][ ][R][o][a][d][ ][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[H][u][r][o][n][ ]
City

[O][H] [4][4][8][3][9]--[ ][ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[1][5]-[7][2][8]-[0][5][0][4]

EPA ID Number .....OHD....[0][0][2][9][4][6][2][9][1]

Employer ID Number*.....[ ][ ][ ][ ][ ][ ][ ][ ]

Primary Standard Industrial Classification (SIC) Code .....[2][8][5][1]

Other SIC Code .....[2][2][2][1]

Other SIC Code .....[ ][ ][ ][ ]

* The Glidden Company cannot identify this number as defined in the Glossary.

1.10 Company Headquarters Identification

CBI Name [T][h][e][ ][G][l][i][d][d][e][n][ ][C][o][m][p][a][n][y][ ][ ][ ][ ][ ][ ][ ]

[ ] Address [9][2][5][ ][E][u][c][l][i][d][ ][A][v][e][n][u][e][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[C][l][e][v][e][l][a][n][d][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]
City

[O][H] [4][4][1][1][5]--[ ][ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[1][5]-[1][3][3]-[4][4][2][2]

Employer ID Number*.....[ ][ ][ ][ ][ ][ ][ ][ ]

* The Glidden Company cannot identify this number as defined in the Glossary.

[ ] Mark (X) this box if you attach a continuation sheet.

1.11 Parent Company Identification

CBI Name [I][C][I][ ][I][n][c][.][ ]

[ ] Address [N][e][w][m][u][r][p][h][y][ ][&][ ][C][o][n][c][o][r][d][ ][P][i][k][e][ ]
Street

[W][i][l][m][i][n][g][t][o][n][ ]
City

[D][E] [1][9][8][9][7]--[ ][ ][ ][ ]
State Zip

Dun & Bradstreet Number .....[0][5]-[4][7][1]-[8][5][8][0]

1.12 Technical Contact

CBI Name [A.][ ][E][ ][G][o][o][d][e][ ]

[ ] Title [S][r.][ ][P][r][o][d][u][c][t][ ][S][a][f][e][t][y][ ][S][p][e][c.][ ][ ][ ][ ][ ]

Address [1][6][6][5][1][ ][S][p][r][a][g][u][e][ ][R][o][a][d][ ][ ][ ][ ][ ][ ][ ][ ]
Street

[S][t][r][o][n][g][s][v][i][l][l][e][ ]
City

[O][H] [4][4][1][3][6]--[ ][ ][ ][ ]
State Zip

Telephone Number .....[2][1][6]-[8][2][6]-[5][4][0][6]

1.13 This reporting year is from ..... [0][1] [8][8] to [1][2] [8][8]
Mo. Year Mo. Year

[ ] Mark (X) this box if you attach a continuation sheet.

1.14 Facility Acquired -- If you purchased this facility during the reporting year, provide the following information about the seller:

Not Applicable

CBI Name of Seller [_]

[_] Mailing Address [_]
Street

[_]
City

[_][_] [_][_][_][_][_]--[_][_][_][_]
State Zip

Employer ID Number .....[_][_][_][_][_][_][_][_][_]

Date of Sale .....[_][_] [_][_] [_][_]
Mo. Day Year

Contact Person [_]

Telephone Number .....[_][_][_]-[_][_][_]-[_][_][_][_]

1.15 Facility Sold -- If you sold this facility during the reporting year, provide the following information about the buyer:

Not Applicable

CBI Name of Buyer [_]

[_] Mailing Address [_]
Street

[_]
City

[_][_] [_][_][_][_][_]--[_][_][_][_]
State Zip

Employer ID Number .....[_][_][_][_][_][_][_][_][_]

Date of Purchase .....[_][_] [_][_] [_][_]
Mo. Day Year

Contact Person [_]

Telephone Number .....[_][_][_]-[_][_][_]-[_][_][_][_]

[_] Mark (X) this box if you attach a continuation sheet.

1.16 For each classification listed below, state the quantity of the listed substance that was manufactured, imported, or processed at your facility during the reporting year.

CBI
[ ]

Classification	Quantity (kg/yr)
Manufactured	
Imported	
Processed (include quantity repackaged)	17,967
Of that quantity manufactured or imported, report that quantity:	
In storage at the beginning of the reporting year	
For on-site use or processing	
For direct commercial distribution (including export)	
In storage at the end of the reporting year	
Of that quantity processed, report that quantity:	
In storage at the beginning of the reporting year	1,232
Processed as a reactant (chemical producer)	17,967
Processed as a formulation component (mixture producer)	
Processed as an article component (article producer)	
Repackaged (including export)	
In storage at the end of the reporting year	3,464

[ ] Mark (X) this box if you attach a continuation sheet.

PART C IDENTIFICATION OF MIXTURES

1.17 Mixture -- If the listed substance on which you are required to report is a mixture or a component of a mixture, provide the following information for each component chemical. (If the mixture composition is variable, report an average percentage of each component chemical for all formulations.)

CBI

[ ] Not Applicable

Component Name	Supplier Name	Average % Composition by Weight (specify precision, e.g., 45% ± 0.5%)
	Total	100%

[ ] Mark (X) this box if you attach a continuation sheet.

2.04 State the quantity of the listed substance that your facility manufactured, imported, or processed during the 3 corporate fiscal years preceding the reporting year in descending order.

CBI

[ ] Year ending ..... [1][2] Mo. [8][7] Year

Quantity manufactured ..... 0 kg

Quantity imported ..... 0 kg

Quantity processed ..... 19,731 kg

Year ending ..... [1][2] Mo. [8][6] Year

Quantity manufactured ..... 0 kg

Quantity imported ..... 0 kg

Quantity processed ..... 14,695 kg

Year ending ..... [1][2] Mo. [8][5] Year

Quantity manufactured ..... 0 kg

Quantity imported ..... 0 kg

Quantity processed ..... 11,613 kg

2.05 Specify the manner in which you manufactured the listed substance. Circle all appropriate process types.

CBI

Not Applicable

[ ]

Continuous process 1

Semicontinuous process 2

Batch process 3

[ ] Mark (X) this box if you attach a continuation sheet.

2.06 Specify the manner in which you processed the listed substance. Circle all
CBI appropriate process types.

[ ]

Continuous process 1

Semicontinuous process 2

Batch process ..... (3)

2.07 State your facility's name-plate capacity for manufacturing or processing the listed substance. (If you are a batch manufacturer or batch processor, do not answer this
CBI question.)

Not Applicable

[ ]

Manufacturing capacity ..... _____ kg/yr

Processing capacity ..... _____ kg/yr

2.08 If you intend to increase or decrease the quantity of the listed substance manufactured, imported, or processed at any time after your current corporate fiscal year, estimate the increase or decrease based upon the reporting year's production
CBI volume.

Not Applicable

[ ]

	Manufacturing Quantity (kg)	Importing Quantity (kg)	Processing Quantity (kg)
Amount of increase			
Amount of decrease			

[ ] Mark (X) this box if you attach a continuation sheet.

2.09 For the three largest volume manufacturing or processing process types involving the listed substance, specify the number of days you manufactured or processed the listed substance during the reporting year. Also specify the average number of hours per day each process type was operated. (If only one or two operations are involved, list those.)

CBI

[ ]

	Days/Year	Average Hours/Day
Process Type #1 (The process type involving the largest quantity of the listed substance.)		
Manufactured		
Processed	28.9	24
Process Type #2 (The process type involving the 2nd largest quantity of the listed substance.)		
Manufactured		
Processed	9.9	24
Process Type #3 (The process type involving the 3rd largest quantity of the listed substance.)		
Manufactured		
Processed		

2.10 State the maximum daily inventory and average monthly inventory of the listed substance that was stored on-site during the reporting year in the form of a bulk chemical.

CBI

[ ]

Maximum daily inventory		kg
Average monthly inventory		kg

[ ] Mark (X) this box if you attach a continuation sheet.

2.11 Related Product Types -- List any byproducts, coproducts, or impurities present with the listed substance in concentrations greater than 0.1 percent as it is manufactured, imported, or processed. The source of byproducts, coproducts, or impurities means the source from which the byproducts, coproducts, or impurities are made or introduced into the product (e.g., carryover from raw material, reaction product, etc.).

CBI

[ ]

CAS No.	Chemical Name	Byproduct, Coproduct or Impurity[1]	Concentration (%) (specify ± % precision)	Source of Byproducts, Coproducts, or Impurities
NA	NA	NA	0.3	NA

[1]Use the following codes to designate byproduct, coproduct, or impurity:

B = Byproduct
C = Coproduct
I = Impurity

[ ] Mark (X) this box if you attach a continuation sheet.

2.12 Existing Product Types -- List all existing product types which you manufactured, imported, or processed using the listed substance during the reporting year. List the quantity of listed substance you use for each product type as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

[ ]

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users[2]
K	100%	100%	I

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additives
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additives
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

2.13 Expected Product Types -- Identify all product types which you expect to manufacture, import, or process using the listed substance at any time after your current corporate fiscal year. For each use, specify the quantity you expect to manufacture, import, or process for each use as a percentage of the total volume of listed substance used during the reporting year. Also list the quantity of listed substance used captively on-site as a percentage of the value listed under column b., and the types of end-users for each product type. (Refer to the instructions for further explanation and an example.)

CBI

[ ]

a. Product Types[1]	b. % of Quantity Manufactured, Imported, or Processed	c. % of Quantity Used Captively On-Site	d. Type of End-Users[2]
K	100%	100%	I

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additives
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additives
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

2.14 CBI [ ] **Final Product -- Complete the following table for each type of final product manufactured, imported, or processed at your facility that contains the listed substance other than as an impurity.**

Not Applicable

a. Product Type[1]	b. Final Product's Physical Form[2]	c. Average % Composition of Listed Substance in Final Product	d. Type of End-Users[3]

[1]Use the following codes to designate product types:

A = Solvent
B = Synthetic reactant
C = Catalyst/Initiator/Accelerator/Sensitizer
D = Inhibitor/Stabilizer/Scavenger/Antioxidant
E = Analytical reagent
F = Chelator/Coagulant/Sequestrant
G = Cleanser/Detergent/Degreaser
H = Lubricant/Friction modifier/Antiwear agent
I = Surfactant/Emulsifier
J = Flame retardant
K = Coating/Binder/Adhesive and additives
L = Moldable/Castable/Rubber and additives
M = Plasticizer
N = Dye/Pigment/Colorant/Ink and additives
O = Photographic/Reprographic chemical and additives
P = Electrodeposition/Plating chemicals
Q = Fuel and fuel additives
R = Explosive chemicals and additives
S = Fragrance/Flavor chemicals
T = Pollution control chemicals
U = Functional fluids and additives
V = Metal alloy and additives
W = Rheological modifier
X = Other (specify) _____

[2]Use the following codes to designate the final product's physical form:

A = Gas
B = Liquid
C = Aqueous solution
D = Paste
E = Slurry
F1 = Powder
F2 = Crystalline solid
F3 = Granules
F4 = Other solid
G = Gel
H = Other (specify) _____

[3]Use the following codes to designate the type of end-users:

I = Industrial
CM = Commercial
CS = Consumer
H = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

2.15 Circle all applicable modes of transportation used to deliver bulk shipments of the CBI listed substance to off-site customers.

Not Applicable

[ ] Truck 1

Railcar 2

Barge, Vessel 3

Pipeline 4

Plane 5

Other (specify) _____ 6

2.16 Customer Use -- Estimate the quantity of the listed substance used by your customers or prepared by your customers during the reporting year for use under each category CBI of end use listed (i-iv).

[ ] Not applicable (Glidden does not sell or distribute the listed substance, other than as an impurity, to its customers)

Category of End Use

i. Industrial Products

Chemical or mixture ..... _____ kg/yr

Article ..... _____ kg/yr

ii. Commercial Products

Chemical or mixture ..... _____ kg/yr

Article ..... _____ kg/yr

iii. Consumer Products

Chemical or mixture ..... _____ kg/yr

Article ..... _____ kg/yr

iv. Other

Distribution (excluding export) ..... _____ kg/yr

Export ..... _____ kg/yr

Quantity of substance consumed as reactant ..... _____ kg/yr

Unknown customer uses ..... _____ kg/yr

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 3 PROCESSOR RAW MATERIAL IDENTIFICATION

PART A GENERAL DATA

3.01 Specify the quantity purchased and the average price paid for the listed substance for each major source of supply listed. Product trades are treated as purchases.
CBI The average price is the market value of the product that was traded for the listed substance.
[ ]

Source of Supply	Quantity (kg)	Average Price ($/kg)
The listed substance was manufactured on-site.	Not Applicable	
The listed substance was transferred from a different company site.	Not Applicable	
The listed substance was purchased directly from a manufacturer or importer.	20,750	$2.695/kg
The listed substance was purchased from a distributor or repackager.	Not Applicable	
The listed substance was purchased from a mixture producer.	Not Applicable	

3.02 Circle all applicable modes of transportation used to deliver the listed substance to your facility.
CBI
[ ]

Truck ..... (1)
Railcar 2
Barge, Vessel 3
Pipeline 4
Plane 5
Other (specify) _____ 6

[ ] Mark (X) this box if you attach a continuation sheet.

3.03 a. Circle all applicable containers used to transport the listed substance to your facility.

CBI

[ ]

Bags 1

Boxes 2

Free standing tank cylinders 3

Tank rail cars 4

Hopper cars 5

Tank trucks 6

Hopper trucks 7

Drums ..... (8)

Pipeline 9

Other (specify) _____ 10

b. If the listed substance is transported in pressurized tank cylinders, tank rail cars, or tank trucks, state the pressure of the tanks.

Not Applicable

Tank cylinders ..... _____ mmHg

Tank rail cars ..... _____ mmHg

Tank trucks ..... _____ mmHg

[ ] Mark (X) this box if you attach a continuation sheet.

PART B RAW MATERIAL IN THE FORM OF A MIXTURE

3.04 If you obtain the listed substance in the form of a mixture, list the trade name(s) of the mixture, the name of its supplier(s) or manufacturer(s), an estimate of the
CBI average percent composition by weight of the listed substance in the mixture, and the amount of mixture processed during the reporting year.

[ ] Not Applicable

Trade Name	Supplier or Manufacturer	Average % Composition by Weight (specify ± % precision)	Amount Processed (kg/yr)

[ ] Mark (X) this box if you attach a continuation sheet.

PART C RAW MATERIAL VOLUME

3.05 State the quantity of the listed substance used as a raw material during the reporting year in the form of a class I chemical, class II chemical, or polymer, and the percent composition, by weight, of the listed substance.

CBI

[ ]

	Quantity Used (kg/yr)	% Composition by Weight of Listed Substance in Raw Material (specify ± % precision)
Class I chemical		
Class II chemical	17,967	99.7%
Polymer		

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 4 PHYSICAL/CHEMICAL PROPERTIES

General Instructions:

If you are reporting on a mixture as defined in the glossary, reply to questions in Section 4 that are inappropriate to mixtures by stating "NA -- mixture."

For questions 4.06-4.15, if you possess any hazard warning statement, label, MSDS, or other notice that addresses the information requested, you may submit a copy or reasonable facsimile in lieu of answering those questions which it addresses.

PART A PHYSICAL/CHEMICAL DATA SUMMARY

4.01 Specify the percent purity for the three major[1] technical grade(s) of the listed substance as it is manufactured, imported, or processed. Measure the purity of the substance in the final product form for manufacturing activities, at the time you import the substance, or at the point you begin to process the substance.

CBI

[ ]

	Manufacture	Import	Process
Technical grade #1	_____% purity	_____% purity	99.7 % purity
Technical grade #2	_____% purity	_____% purity	_____% purity
Technical grade #3	_____% purity	_____% purity	_____% purity

[1]Major = Greatest quantity of listed substance manufactured, imported or processed.

4.02 Submit your most recently updated Material Safety Data Sheet (MSDS) for the listed substance, and for every formulation containing the listed substance. If you possess an MSDS that you developed and an MSDS developed by a different source, submit your version. Indicate whether at least one MSDS has been submitted by circling the appropriate response.

Yes ..... (1)

No 2

Indicate whether the MSDS was developed by your company or by a different source.

Your company ..... (1)

Another source 2

[X] Mark (X) this box if you attach a continuation sheet.

MATERIAL SAFETY DATA SHEET

THE GLIDDEN COMPANY

925 EUCLID AVENUE
CLEVELAND, OHIO 44115
EMERGENCY TELEPHONE NO. (216) 826-5566

COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.

SECTION I

CODE IDENTIFICATION
PRODUCT IDENTIFICATION 1,3-DIISOCYANATE METHYL-BENZENE

DATE PRINTED 05/24/89

SECTION II-A - HAZARDOUS INGREDIENTS

CHEMICAL NAME	WEIGHT PERCENT	ACGIH TLV OSHA PEL SUPP REC STD.	LD 50 + UNIT ROUTE STEL
1,3-DIISOCYANATE METHYL-BENZENE	100	.005 PPM .02 PPM NOT EST.	NOT EST. NOT EST.

CARCINOGENICITY LISTED BY: NTP? YES IARC MONOGRAPH? YES OSHA? NO
COMMON NAME: TOLUENE DIISOCYANATE SARA ? *,**
CAS NO. - 26471-62-5

* THIS CHEMICAL IS SUBJECT TO SARA 302 REPORTING REQUIREMENTS (40 CFR PART 355).
** THIS CHEMICAL IS SUBJECT TO SARA 313 REPORTING REQUIREMENTS (40 CFR PART 372).
LEL - THE LOWER EXPLOSIVE LIMIT IS THE LOWEST CONCENTRATION (% OF VOLATILES IN AIR) THAT WILL PRODUCE A FLASH OF FIRE WHEN AN IGNITION SOURCE IS PRESENT.

SECTION III - PHYSICAL DATA

VAPOR PRESSURE	.10	SPECIFIC GRAVITY	1.220
BOILING RANGE	484 - 484 F	WEIGHT PER GALLON	10.16
%VOLATILE BY VOLUME			
PHYSICAL STATE	LIQUID	COLOR	CLEAR
SOLUBILITY IN WATER	NOT DETERMINED	PH	NOT DETERMINED

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (SETA) ABOVE 200 F

LOWER EXPLOSIVE LIMIT .9
UPPER EXPLOSIVE LIMIT NOT DETERMINED

EXTINGUISHING MEDIA

DRY CHEMICAL OR FOAM
WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS

CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE.

SPECIAL FIRE FIGHTING PROCEDURES

WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS.

MATERIAL SAFETY DATA SHEET

THE GLIDDEN COMPANY

925 EUCLID AVENUE
CLEVELAND, OHIO 44115
EMERGENCY TELEPHONE NO. (216) 826-5566

COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF EXPOSURE

NOT DETERMINED

EFFECTS OF OVEREXPOSURE

INHALATION	IRRITATION OF RESPIRATORY TRACT. PROLONGED INHALATION MAY LEAD TO MUCOUS MEMBRANE IRRITATION, BRONCHITIS. POSSIBLE SENSITIZATION TO.
SKIN CONTACT	IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE SEVERE SKIN IRRITATION OR BURNS. POSSIBLE SENSITIZATION TO SKIN.
EYE CONTACT	IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE SEVERE EYE IRRITATION OR BURNS, CORNEAL INJURY. POSSIBLE SENSITIZATION TO.
INGESTION	NOT DETERMINED

SUPPLEMENTAL HEALTH INFORMATION

FREE DIISOCYANATE MAY CAUSE ALLERGIC REACTION INSUSCEPTIBLE PERSONS.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

NOT DETERMINED

SECTION VI - FIRST AID PROCEDURES

INHALATION	REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING. GET EMERGENCY MEDICAL ATTENTION. HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY.
SKIN CONTACT	WASH OFF QUICKLY WITH PLENTY OF WATER, THEN SOAP AND WATER; REMOVE CONTAMINATED CLOTHING. REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE RE-USE.
EYE CONTACT	FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. OBTAIN EMERGENCY MEDICAL TREATMENT.
INGESTION	IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.

SECTION VII - REACTIVITY DATA

STABILITY STABLE

INCOMPATIBILITY ACIDS, BASES, AMINES, WATER, ALUMINUM, COPPER, ALCOHOLS.

CONDITIONS TO AVOID

MOISTURE.

HAZARDOUS DECOMPOSITION PRODUCTS

CARBON MONOXIDE, OXIDES OF NITROGEN, HYDROGEN CYANIDE.

MATERIAL SAFETY DATA SHEET

THE GLIDDEN COMPANY

925 EUCLID AVENUE
CLEVELAND, OHIO 44115
EMERGENCY TELEPHONE NO. (216) 826-5566

COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.

SECTION VII - REACTIVITY DATA

HAZARDOUS POLYMERIZATION

MAY OCCUR

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS.
VENTILATE AREA.
SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS.

WASTE DISPOSAL DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

SECTION IX - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

CONTROL ENVIRONMENTAL CONCENTRATIONS BELOW APPLICABLE STANDARDS. WHERE RESPIRATORY PROTECTION IS REQUIRED, USE ONLY NIOSH/MSHA APPROVED RESPIRATORS IN ACCORDANCE WITH OSHA STANDARD 29 CFR 1910.134.

VENTILATION PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS.

PERSONAL PROTECTIVE EQUIPMENT

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES.
IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING, APRON.

SECTION X - SPECIAL PRECAUTIONS

HANDLING AND STORAGE

STORE BELOW 100 F.
DO NOT STORE IN ALUMINUM CONTAINERS.

OTHER PRECAUTIONS USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS RESIDUES.

DOT (PSN) TOLUENE DIISOCYANATE, UN2078

HAZARD CLASS POISON B

4.03 Submit a copy or reasonable facsimile of any hazard information (other than an MSDS) that is provided to your customers/users regarding the listed substance or any formulation containing the listed substance. Indicate whether this information has been submitted by circling the appropriate response.

Not Applicable

Yes 1

No ..... (2)

4.04 For each activity that uses the listed substance, circle all the applicable number(s) corresponding to each physical state of the listed substance during the activity listed. Physical states for importing and processing activities are determined at the time you import or begin to process the listed substance. Physical states for manufacturing, storage, disposal and transport activities are determined using the final state of the product.

CBI

[ ]

Activity	Physical State				
	Solid	Slurry	Liquid	Liquified Gas	Gas
Manufacture	1	2	3	4	5
Import	1	2	3	4	5
Process	1	2	(3)	4	5
Store	1	2	(3)	4	5
Dispose	1	2	(3)	4	(5)
Transport	1	2	3	4	5

[ ] Mark (X) this box if you attach a continuation sheet.

4.05 Particle Size -- If the listed substance exists in particulate form during any of the following activities, indicate for each applicable physical state the size and the percentage distribution of the listed substance by activity. Do not include particles ≥10 microns in diameter. Measure the physical state and particle sizes for importing and processing activities at the time you import or begin to process the listed substance. Measure the physical state and particle sizes for manufacturing storage, disposal and transport activities using the final state of the product.

CBI

[ ]

Not Applicable

Physical State		Manufacture	Import	Process	Store	Dispose	Transport
Dust	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Powder	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Fiber	<1 micron						
	1 to <5 microns						
	5 to <10 microns						
Aerosol	<1 micron						
	1 to <5 microns						
	5 to <10 microns						

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 5 ENVIRONMENTAL FATE

PART A RATE CONSTANTS AND TRANSFORMATION PRODUCTS

5.01 Indicate the rate constants for the following transformation processes.

a. **Photolysis:**

Absorption spectrum coefficient (peak) .... UK (1/M cm) at - nm

Reaction quantum yield, ϕ ..... UK at - nm

Direct photolysis rate constant, k_p, at ... UK 1/hr - latitude

b. Oxidation constants at 25°C:

For $^1O_2$ (singlet oxygen), k_{ox} ..... UK 1/M hr

For RO_2 (peroxy radical), k_{ox} ..... UK 1/M hr

c. Five-day biochemical oxygen demand, BOD_5 ... UK mg/l

d. Biotransformation rate constant:

For bacterial transformation in water, k_b... UK 1/hr

Specify culture ..... -

e. Hydrolysis rate constants:

For base-promoted process, k_B ..... UK 1/M hr

For acid-promoted process, k_A ..... UK 1/M hr

For neutral process, k_N ..... UK 1/hr

f. Chemical reduction rate (specify conditions) UK

g. Other (such as spontaneous degradation) ... UK

[ ] Mark (X) this box if you attach a continuation sheet.

PART B PARTITION COEFFICIENTS

5.02 a. Specify the half-life of the listed substance in the following media.

Media	Half-life (specify units)
Groundwater	Varies with concentration
Atmosphere	3.3 hours
Surface water	24 hours
Soil	24 hours

b. Identify the listed substance's known transformation products that have a half-life greater than 24 hours.

CAS No.	Name	Half-life (specify units)		Media
UK	toluene diamines	UK	in	all
UK	TDI-derived polyureas	UK	in	soil
			in	
			in	

5.03 Specify the octanol-water partition coefficient, K_{ow} ... UK at 25°C

Method of calculation or determination .....

5.04 Specify the soil-water partition coefficient, K_d ..... UK at 25°C

Soil type .....

5.05 Specify the organic carbon-water partition coefficient, K_{oc} ..... UK at 25°C

5.06 Specify the Henry's Law Constant, H ..... UK $atm\text{-}m^3/mole$

[ ] Mark (X) this box if you attach a continuation sheet.

5.07 List the bioconcentration factor (BCF) of the listed substance, the species for which it was determined, and the type of test used in deriving the BCF.

Bioconcentration Factor	Species	Test[1]
NA	NA	NA

[1]Use the following codes to designate the type of test:

F = Flowthrough
S = Static

[ ] Mark (X) this box if you attach a continuation sheet.

6.04 For each market listed below, state the quantity sold and the total sales value of
CBI the listed substance sold or transferred in bulk during the reporting year.

[ ]

Market	Quantity Sold or Transferred (kg/yr)	Total Sales Value ($/yr)
Retail sales		
Distribution -- Wholesalers		
Distribution -- Retailers		
Intra-company transfer		
Repackagers		
Mixture producers		
Article producers		
Other chemical manufacturers or processors		
Exporters		
Other (specify)		
_____		

6.05 Substitutes -- List all known commercially feasible substitutes that you know exist for the listed substance and state the cost of each substitute. A commercially feasible substitute is one which is economically and technologically feasible to use
CBI in your current operation, and which results in a final product with comparable performance in its end uses.

[ ]

Substitute	Cost ($/kg)
None	

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 7 MANUFACTURING AND PROCESSING INFORMATION

General Instructions:

For questions 7.04-7.06, provide a separate response for each process block flow diagram provided in questions 7.01, 7.02, and 7.03. Identify the process type from which the information is extracted.

PART A MANUFACTURING AND PROCESSING PROCESS TYPE DESCRIPTION

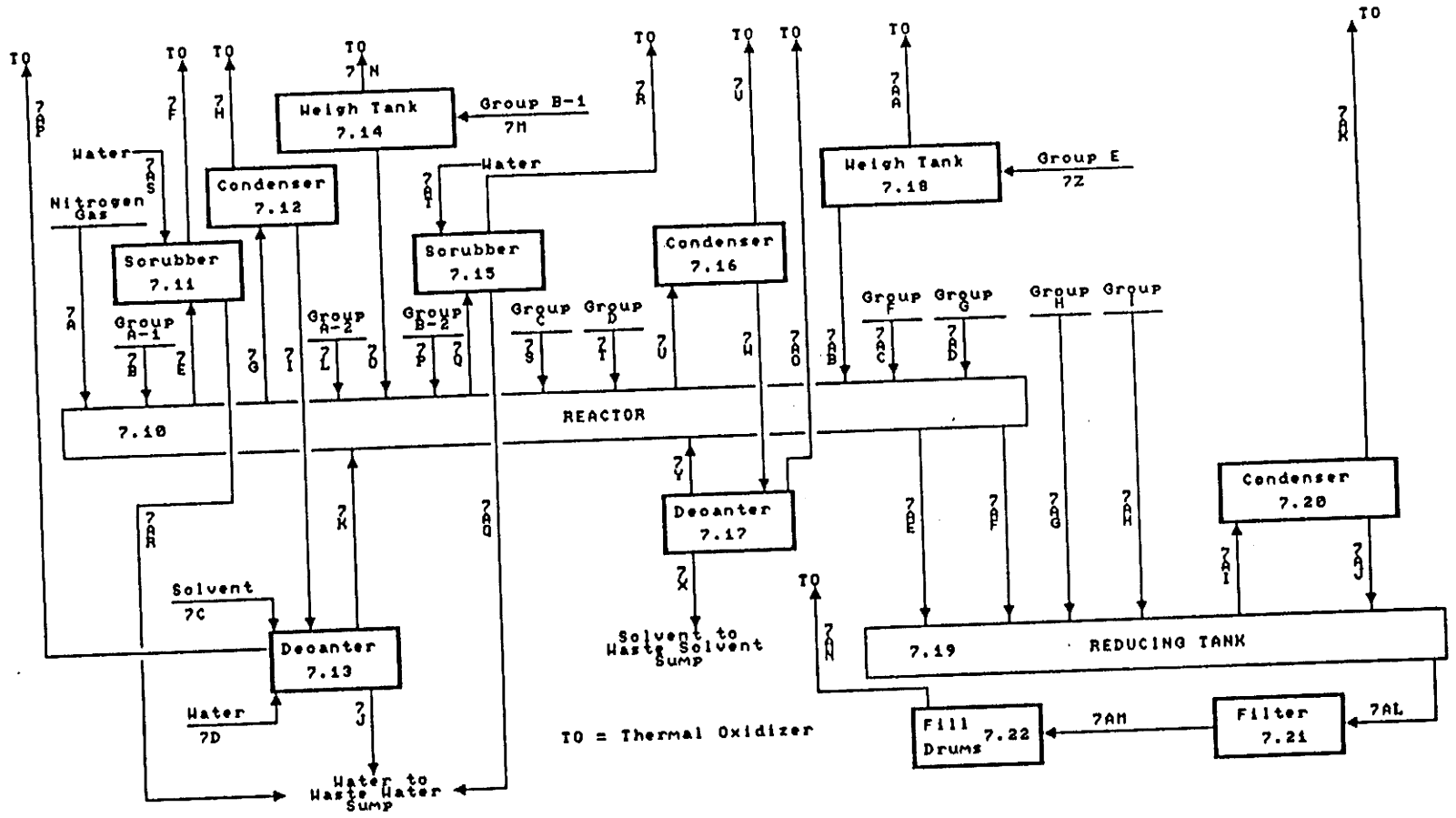
7.01 In accordance with the instructions, provide a process block flow diagram showing the major (greatest volume) process type involving the listed substance.

CBI

[ ] Process type ..... Batch Copolymerization

See Attached

[X] Mark (X) this box if you attach a continuation sheet.


TO
Weigh Tank 7.14
Group B-1
7M
Water
Nitrogen Gas
Condenser 7.12
Scrubber 7.11
Scrubber 7.15
Condenser 7.16
Weigh Tank 7.18
Group E
7Z
Group A-1
Group A-2
Group B-2
Group C
Group D
Group F
Group G
Group H
Group I
7.10
REACTOR
Decanter 7.17
Condenser 7.20
Solvent
7C
Decanter 7.13
Water
7D
Water to Waste Water Sump
Solvent to Waste Solvent Sump
7.19
REDUCING TANK
Fill Drums 7.22
Filter 7.21
7AM
7AL
TO = Thermal Oxidizer

Raw Material Additions - Batch Copolymerization

Stream ID	Group	Material
7B	A_1	Hydrogenated Bisphenol A Adipic Acid Xylene
7L	A_2	Xylene
7M, 7O	B_1	Methyl Ethyl Ketone
7P	B_2	Dimethylol Propionic Acid
7S	C	Toluene Diisocyanate
7T	D	Methyl Ethyl Ketone
7Z, 7AB	E	Butyl Cellosolve
7AC	F	Diisopropanolamine Water
7AD	G	Water
7AG	H	Hexamethoxymethylmelamine
7AH	I	Water

7.03 In accordance with the instructions, provide a process block flow diagram showing all process emission streams and emission points that contain the listed substance and which, if combined, would total at least 90 percent of all facility emissions if not treated before emission into the environment. If all such emissions are released from one process type, provide a process block flow diagram using the instructions for question 7.01. If all such emissions are released from more than one process type, provide a process block flow diagram showing each process type as a separate block.

CBI

[ ] Process type ..... _____

Not Applicable

[ ] Mark (X) this box if you attach a continuation sheet.

7.04 Describe the typical equipment types for each unit operation identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Batch Copolymerization

Unit Operation ID Number	Typical Equipment Type	Operating Temperature Range (°C)	Operating Pressure Range (mm Hg)	Vessel Composition
7.10	Stirred Tank Reactor	10-235	20-760	Stainless
7.11	Scrubber	0-50	Atmospheric	Stainless
7.12	Condenser	0-150	20-760	Stainless
7.13	Decanter	Ambient	20-760	Stainless
7.14	Weigh Tank	Ambient	Atmospheric	Stainless
7.15	Scrubber	0-50	Atmospheric	Stainless
7.16	Condenser	0-150	Atmospheric	Stainless
7.17	Decanter	Ambient	Atmospheric	Stainless
7.18	Weigh Tank	Ambient	Atmospheric	Stainless
7.19	Reducing Tank	20-80	Atmospheric	Stainless
7.20	Condenser	20-80	Atmospheric	Stainless
7.21	Filter	30-50	1500-3500	Stainless
7.22	Drums	30-50	Atmospheric	Steel

[ ] Mark (X) this box if you attach a continuation sheet.

7.05 **Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.**

CBI

[ ] **Process type .....** Batch Copolymerization

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7A	Inert Gas	GU	4428
7B	Material Charge (A_1)	SO/OL	20845
7C	Decanter Charge	OL	1562
7D	Decanter Charge	AL	3094
7E	Scrubber	GU	12414
7F	Scrubber	GU	12414
7G	Reflux Vapor	GC	47550
7H	Reflux Vent	GU	2629

[1]Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[X] **Mark (X) this box if you attach a continuation sheet.**

7.05 **Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.**

CBI

[ ] **Process type .....** Batch Copolymerization

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7I	Reflux Condensate	OL	44921
7J	Water to Waste	AL	3950
7K	Condensate Return	OL	40971
7L	Material Charge (A_2)	OL	772
7M	Material Charge (B_1)	OL	24054
7N	Loading Vent	GU	36
7O	Material Charge (B_1)	OL	24054
7P	Material Charge (B_2)	SO	4711

[1]Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[X] **Mark (X) this box if you attach a continuation sheet.**

7.05 **Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.**

CBI

[ ] **Process type .....** Batch Copolymerization

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7Q	Scrubber	GU	1857
7R	Scrubber	GU	1857
7S	Material Charge (C)	OL	12947
7T	Material Charge (D)	OL	1767
7U	Reflux Vapor	GC	83453
7V	Reflux Vent	GU	3402
7W	Reflux Condensate	OL	80051
7X	Stripped Solvent	OL	27934

[1]Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[X] **Mark (X) this box if you attach a continuation sheet.**

7.05 **Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.**

CBI

[ ] **Process type .....** Batch Copolymerization

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7Y	Condensate Return	OL	52117
7Z	Material Charge (E)	OL	18660
7AA	Loading Vent	GU	26
7AB	Material Charge (E)	OL	18660
7AC	Material Charge (F)	OL/AL	12923
7AD	Material Charge (G)	AL	47637
7AE	Resin Drop	OL	75276
7AF	Material Drop	AL	47637

[1]Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[X] **Mark (X) this box if you attach a continuation sheet.**

7.05 **Describe each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type.**

CBI

[ ] **Process type .....** Batch Copolymerization

Process Stream ID Code	Process Stream Description	Physical State[1]	Stream Flow (kg/yr)
7AG	Material Charge (H)	OL	16567
7AH	Material Charge (I)	AL	3066
7AI	Vapor Outlet	GC	721
7AJ	Vapor Condensate	AL	111
7AK	Vapor Vent	GU	610
7AL	Product Drop	AL	134428
7AM	Product Fill	AL	134428

[1]Use the following codes to designate the physical state for each process stream:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[ ] **Mark (X) this box if you attach a continuation sheet.**

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7A	Nitrogen	100.0% (E)(W)	NA	NA
7B	Hydrogenated Bisphenol A	81.5% (E)(W)	NA	NA
	Adipic Acid	16.6 (E)(W)	NA	NA
	Xylene	1.9 (E)(W)	NA	NA
7C	Xylene	100.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7D	Water	100.0% (E)(W)	NA	NA
7E	Air	100.0% (E)(W)	Adipic Acid	<0.001%
			Xylene	<0.001%
7F	Air	100.0% (E)(W)	Xylene	<0.001%

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the BI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7G	Xylene	86.1% (E)(W)	NA	NA
	Water	1.6 (E)(W)	NA	NA
	Nitrogen	12.3 (E)(W)	NA	NA
7H	Xylene	0.45% (E)(W)	NA	NA
	Water	0.05 (E)(W)	NA	NA
	Nitrogen	99.5 (E)(W)	NA	NA
7I	Water	1.8% (E)(W)	NA	NA
	Xylene	98.2 (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7J	Water	100.0% (E)(W)	Xylene	<0.1%
7K	Xylene	100.0% (E)(W)	Water	<0.1%
7L	Xylene	100.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7M	Methyl Ethyl Ketone (MEK)	100.0% (E)(W)	NA	NA
7N	Air	95.3% (E)(W)	NA	NA
	MEK	4.7 (E)(W)	NA	NA
7O	MEK	100.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7P	Dimethylol Propionic Acid	100.0% (E)(W)	NA	NA
7Q	Air	97.0% (E)(W)	Xylene	Trace
	MEK	3.0% (E)(W)	NA	NA
7R	Air	97.0% (E)(W)	Xylene	Trace
	MEK	3.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7S	Toluene Diisocyanate (TDI)	100.0% (E)(W)	NA	NA
7T	MEK (rinse)	100.0% (E)(W)	TDI	Trace
7U	MEK	39.07% (E)(W)	NA	NA
	Xylene (XY)	1.36 (E)(W)	NA	NA
	TDI	0.0002 (E)(W)	NA	NA
	Butyl Cellosolve (BC)	2.13 (E)(W)	NA	NA
	Nitrogen	57.44 (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7V	MEK	17.95% (E)(W)	NA	NA
	XY	0.09 (E)(W)	NA	NA
	BC	0.02 (E)(W)	NA	NA
	Nitrogen	81.94 (E)(W)	NA	NA
	TDI	.0000000002 (E)(W)	NA	NA
7W	MEK	99.4% (E)(W)	NA	NA
	XY	0.5 (E)(W)	NA	NA
	BC	0.1 (E)(W)	NA	NA
	TDI	.0000000001 (E)(W)	NA	NA
7X	MEK	84.05% (E)(W)	NA	NA
	XY	5.65 (E)(W)	NA	NA
	BC	10.30 (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

BI

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)		d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7Y	MEK	99.4%	(E)(W)	NA	NA
	XY	0.5	(E)(W)	NA	NA
	BC	0.1	(E)(W)	NA	NA
			(E)(W)	NA	NA
	TDI	.0000000001	(E)(W)	NA	NA
7Z	BC	100.0%	(E)(W)	NA	NA
7AA	Air	99.98%	(E)(W)	NA	NA
	BC	0.02	(E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7AB	BC	100.0% (E)(W)	NA	NA
7AC	Diisopropanolamine	75.4% (E)(W)	NA	NA
	Water	24.6 (E)(W)	NA	NA
7AD	Water	100.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7AE	Urethane Resin (CAS # 68299-33-2)	51.5% (E)(W)	Xylene	NA
	MEK	4.8 (E)(W)	NA	NA
	BC	25.8 (E)(W)	NA	NA
	Diisopropanolamine	13.5 (E)(W)	NA	NA
	Water	4.4 (E)(W)	NA	NA
7AF	Water	100.0% (E)(W)	NA	NA
7AG	Hexamethoxymethylmelamine	100.0% (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the CBI instructions for further explanation and an example.)

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7AH	Water	100.0% (E)(W)	NA	NA
7AI	Water	65.6% (E)(W)	Xylene	NA
	BC	2.4 (E)(W)	NA	NA
	MEK	32.0 (E)(W)	NA	NA
7AJ	Water	67.7% (E)(W)	NA	NA
	BC	2.5 (E)(W)	NA	NA
	MEK	29.8 (E)(W)	NA	NA

7.06 continued below

[X] Mark (X) this box if you attach a continuation sheet.

7.06 Characterize each process stream identified in your process block flow diagram(s). If a process block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

BI

[ ] Process type ..... Batch Copolymerization

a. Process Stream ID Code	b. Known Compounds[1]	c. Concentrations[2,3] (% or ppm)	d. Other Expected Compounds	e. Estimated Concentrations (% or ppm)
7AK	Water	49.8% (E)(W)	NA	NA
	BC	0.9 (E)(W)	NA	NA
	MEK	49.3 (E)(W)	NA	NA
7AL	Urethane Resin	37.93% (E)(W)	XY	Trace
	Water	37.97 (E)(W)	NA	NA
	BC	11.12 (E)(W)	NA	NA
	MEK	6.12 (E)(W)	NA	NA
	Diisopropanolamine	6.86 (E)(W)	NA	NA
7AM	Urethane Resin	37.93% (E)(W)	XY	Trace
	Water	37.97 (E)(W)	NA	NA
	BC	11.12 (E)(W)	NA	NA
	MEK	6.12 (E)(W)	NA	NA
	Diisopropanolamine	6.86 (E)(W)	NA	NA

7.06 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

7.06 (continued)

[1]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column b. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.)

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1	Not Applicable	
2	Not Applicable	
3	Not Applicable	
4	Not Applicable	
5	Not Applicable	

[2]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

[3]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

[ ] Mark (X) this box if you attach a continuation sheet.

PART A RESIDUAL TREATMENT PROCESS DESCRIPTION

8.01 In accordance with the instructions, provide a residual treatment block flow diagram which describes the treatment process used for residuals identified in question 7.01.

CBI

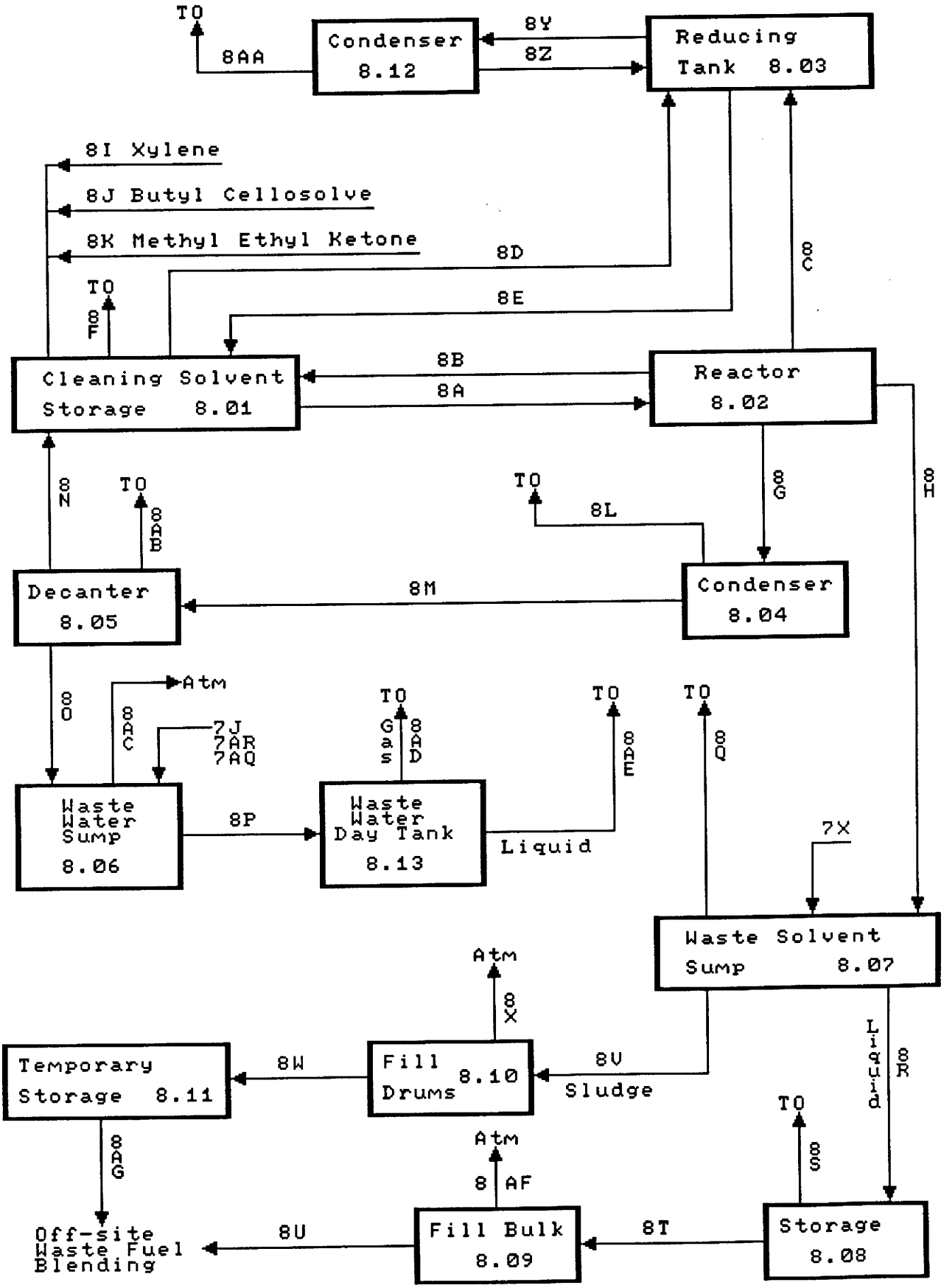
[ ] Process type ..... Batch Copolymerization

See Attached

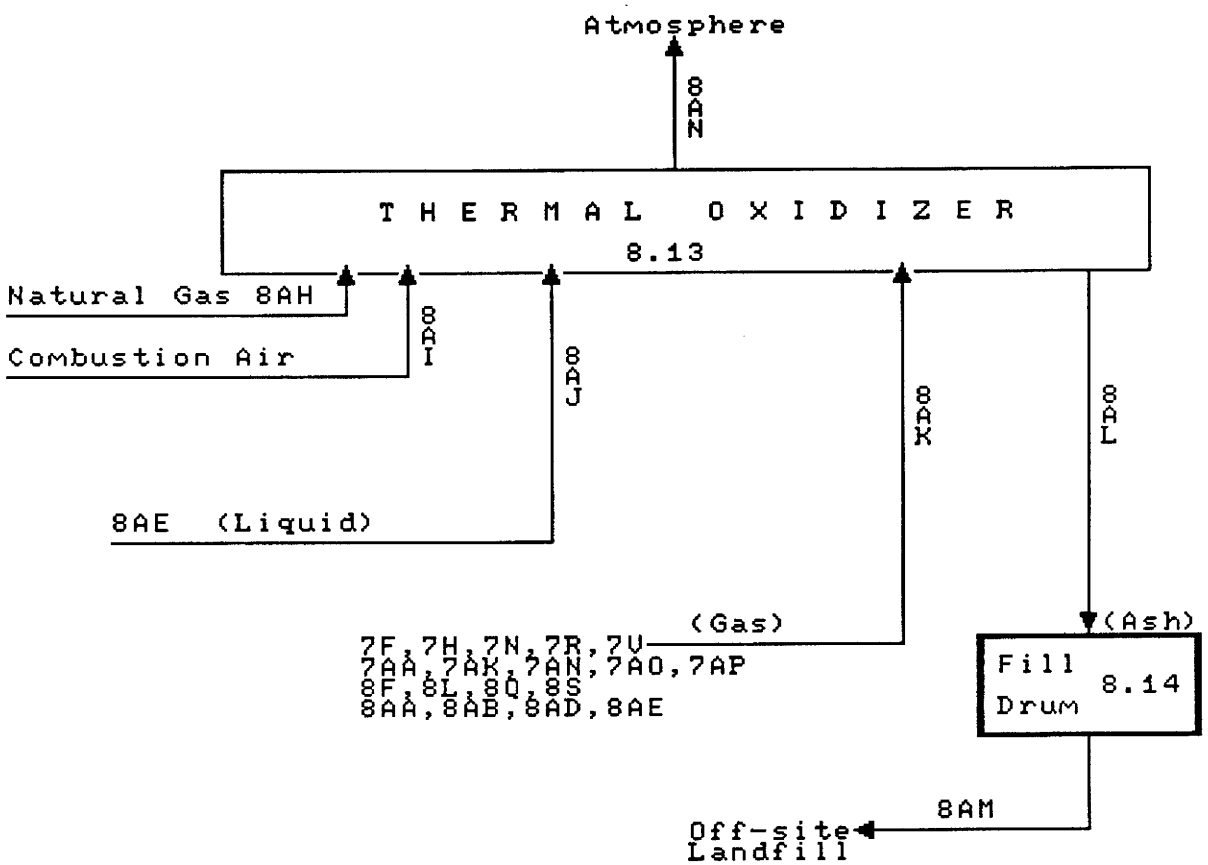
[X] Mark (X) this box if you attach a continuation sheet.

HURON RESIDUAL TREATMENT FLOW DIAGRAM

TO = Thermal Oxidizer



HURON RESIDUALS



PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8A	T,I	OL	Xylene (XY)	<60%(E)(W)	Water	NA
			Butyl Cellosolve (BC)	<20%(E)(W)	NA	NA
			Methyl Ethyl Ketone (MEK)	<20%(E)(W)	NA	NA
8B	T,I	OL	XY	<60%(E)(W)	Water	NA
			BC	<20%(E)(W)	NA	NA
			MEK	<20%(E)(W)	NA	NA
			Urethane Resin (CAS# 68299-33-2)	<0.2%(E)(W)	NA	NA
8C	T,I	OL	XY	<60%(E)(W)	Water	NA
			BC	<20%(E)(W)	NA	NA
			MEK	<20%(E)(W)	NA	NA
			Urethane Resin (CAS# 68299-33-2)	<0.2%(E)(W)	NA	NA
8D	T,I	OL	XY	<60%(E)(W)	Water	NA
			BC	<20%(E)(W)	NA	NA
			MEK	<20%(E)(W)	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8E	T,I	OL	XY	<60%(E)(W)	Water	NA
			BC	<20%(E)(W)	NA	NA
			MEK	<20%(E)(W)	NA	NA
			Urethane Resin (CAS# 68299-33-2)	<0.4%(E)(W)	NA	NA
8F	T,I	GU	XY	21%(E)(W)	NA	NA
			BC	1%(E)(W)	NA	NA
			MEK	78%(E)(W)	NA	NA
8G	T,I	GC	XY	<28%(E)(W)	Water	NA
			BC	< 26%(E)(W)	NA	NA
			MEK	<46%(E)(W)	NA	NA
8H	T,I	OL	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8I	T,I	OL	XY	100%(E)(W)	NA	NA
8J	T,I	OL	BC	100%(E)(W)	NA	NA
8K	T,I	OL	MEK	100%(E)(W)	NA	NA
8L	T,I	GU	XY	5%(E)(W)	NA	NA
			BC	0.5%(E)(W)	NA	NA
			MEK	94.5%(E)(W)	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8M	T,I	OL	XY	23%(E)(W)	Water	NA
			BC	19%(E)(W)	NA	NA
			MEK	58%(E)(W)	NA	NA
8N	T,I	OL	XY	23%(E)(W)	NA	NA
			BC	19%(E)(W)	NA	NA
			MEK	58%(E)(W)	NA	NA
8O	T	AL	Water	NA	NA	NA
			XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8P	T	AL	Water	NA	NA	NA
			XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8Q	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8R	T,I	OL	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8S	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8T	T,I	OL	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8U	T,I	OL	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8V	T	SY	NA	NA	NA	NA
8W	T	SY	NA	NA	NA	NA
8X	T	GU	NA	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8Y	T,I	GC	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8Z	T,I	OL	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8AA	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8AB	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

PART B RESIDUAL GENERATION AND CHARACTERIZATION

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8AC	T	GU	Water	NA	NA	NA
8AD	T	GU	Water	NA	NA	NA
8AE	T	AL	Water	NA	NA	NA
8AF	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8AG	T,I	SY	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
8AH	T,I	GU	Methane	NA	NA	NA
8AI	-	GU	Air	NA	NA	NA
8AJ	T	AL	Water	NA	NA	NA

8.05 continued below

[X] Mark (X) this box if you attach a continuation sheet.

8.05 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Type of Hazardous Waste[1]	c. Physical State of Residual[2]	d. Known Compounds[3]	e. Concentrations (% or ppm)[4,5,6]	f. Other Expected Compounds	g. Estimated Concentrations (% or ppm)
8AK	T,I	GU	XY	NA	NA	NA
			BC	NA	NA	NA
			MEK	NA	NA	NA
			Nitrogen	NA	NA	NA
			Water	NA	NA	NA
8AL	T	SO	NA	NA	NA	NA
8AM	T	SO	NA	NA	NA	NA
8AN	T	GU	NA	NA	NA	NA

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[1]Use the following codes to designate the type of hazardous waste:

I = Ignitable
C = Corrosive
R = Reactive
E = EP toxic
T = Toxic
H = Acutely hazardous

[2]Use the following codes to designate the physical state of the residual:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[3]For each additive package introduced into a process stream, specify the compounds that are present in each additive package, and the concentration of each component. Assign an additive package number to each additive package and list this number in column d. (Refer to the instructions for further explanation and an example. Refer to the glossary for the definition of additive package.) Not Applicable

Additive Package Number	Components of Additive Package	Concentrations (% or ppm)
1		
2		
3		
4		
5		

[4]Use the following codes to designate how the concentration was determined:

A = Analytical result
E = Engineering judgement/calculation

8.05 continued below

[ ] Mark (X) this box if you attach a continuation sheet.

8.05 (continued)

[5]Use the following codes to designate how the concentration was measured:

V = Volume
W = Weight

[6]Specify the analytical test methods used and their detection limits in the table below. Assign a code to each test method used and list those codes in column e.

Not Applicable

Code	Method	Detection Limit (± ug/l)
1		
2		
3		
4		
5		
6		

[ ] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8A	B60	NA	77440	NA	NA	NA	None
8B	B60	NA	77440	NA	NA	NA	None
8C	B60	NA	77440	NA	NA	NA	None
8D	B60	NA	37673	NA	NA	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8E	B60	NA	115113	NA	NA	NA	None
8F	B91	11I	480	100	0	NA	None
8G	B91	NA	190764	NA	NA	NA	None
8H	A01	NA	32762	NA	NA	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8I	B60	NA	NA	NA	NA	NA	None
8J	B60	NA	NA	NA	NA	NA	None
8K	B60	NA	NA	NA	NA	NA	None
8L	B91	11I	122	100	0	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8M	B58	NA	190642	NA	NA	NA	None
8N	B60	NA	190642	NA	NA	NA	None
8O	B01	NA	NA	NA	NA	NA	None
8P	B01	11I	2784218*	100	0	NA	None

* Plant total, all resins

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8Q	B91	11I	NA	100	0	NA	None
8R	A01	NA	NA	NA	NA	NA	None
8S	B91	11I	NA	100	0	NA	None
8T	A01	NA	NA	NA	NA	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8U	A01	1FB	852388*	0	100	.10	None
8V	B82	NA	NA	NA	NA	NA	None
8W	B82	NA	22714*	NA	NA	NA	None
8X	B91	NA	852388*	NA	NA	NA	None

* Plant total, all resins

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8Y	B91	NA	NA	NA	NA	NA	None
8Z	B60	NA	NA	NA	NA	NA	None
8AA	B91	11I	NA	100	0	NA	None
8AB	B91	11I	NA	100	0	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8AC	B57	NA	NA	NA	NA	NA	None
8AD	B57	11I	NA	100	0	NA	None
8AE	B01	11I	NA	100	0	NA	None
8AF	B91	NA	NA	NA	NA	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[X] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8AG	B82	NA	22714*	NA	NA	NA	None
8AH	NA	NA	NA	NA	NA	NA	None
8AI	NA	NA	NA	NA	NA	NA	None
8AJ	B01	11I	NA	100	0	NA	None

* Plant total, all resins

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[x] Mark (X) this box if you attach a continuation sheet.

8.06 Characterize each process stream identified in your residual treatment block flow diagram(s). If a residual treatment block flow diagram is provided for more than one process type, photocopy this question and complete it separately for each process type. (Refer to the instructions for further explanation and an example.)

CBI

[ ] Process type ..... Batch Copolymerization

a. Stream ID Code	b. Waste Description Code[1]	c. Management Method Code[2]	d. Residual Quantities (kg/yr)	e. Management of Residual (%) On-Site	e. Management of Residual (%) Off-Site	f. Costs for Off-Site Management (per kg)	g. Changes in Management Methods
8AK	B91	11I	NA	100	0	NA	None
8AL	B39	1D	NA	0	100	.04	None
8AM	B39	1D	NA	0	100	.04	None
8AN	B57	NA	NA	NA	NA	NA	None

[1]Use the codes provided in Exhibit 8-1 to designate the waste descriptions

[2]Use the codes provided in Exhibit 8-2 to designate the management methods

[ ] Mark (X) this box if you attach a continuation sheet.

8.22 Describe the combustion chamber design parameters for each of the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Incinerator	Combustion Chamber Temperature (°C)		Location of Temperature Monitor		Residence Time In Combustion Chamber (seconds)	
	Primary	Secondary	Primary	Secondary	Primary	Secondary
1						
2						
3						

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No 2

8.23 Complete the following table for the three largest (by capacity) incinerators that are used on-site to burn the residuals identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Incinerator	Air Pollution Control Device[1]	Types of Emissions Data Available
1	O	N A
2		
3		

Indicate if Office of Solid Waste survey has been submitted in lieu of response by circling the appropriate response.

Yes 1

No ..... (2)

[1] Use the following codes to designate the air pollution control device:

S = Scrubber (include type of scrubber in parenthesis)
E = Electrostatic precipitator
O = Other (specify) High Temperature Thermal Oxidizer

[ ] Mark (X) this box if you attach a continuation sheet.

PART A EMPLOYMENT AND POTENTIAL EXPOSURE PROFILE

9.01 Mark (X) the appropriate column to indicate whether your company maintains records on the following data elements for hourly and salaried workers. Specify for each data element the year in which you began maintaining records and the number of years the records for that data element are maintained. (Refer to the instructions for further explanation and an example.)

CBI

[ ]

Data Element	Data are Maintained for: Hourly * Workers	Data are Maintained for: Salaried Workers	Year in Which Data Collection Began	Number of Years Records Are Maintained
Date of hire		X	1965	Permanent
Age at hire		X	1965	Permanent
Work history of individual before employment at your facility		X	1965	Permanent
Sex		X	1965	Permanent
Race		X	1965	Permanent
Job titles		X	1965	Permanent
Start date for each job title		X	1965	Permanent
End date for each job title		X	1965	Permanent
Work area industrial hygiene monitoring data		X	1977	Permanent
Personal employee monitoring data		X	1977	Permanent
Employee medical history		X	1978	Permanent
Employee smoking history		X	1978	Permanent
Accident history		X	1933	Permanent
Retirement date		X	1965	Permanent
Termination date		X	1965	Permanent
Vital status of retirees		X	1986	Permanent
Cause of death data		X	1986	Permanent

* No hourly workers

[ ] Mark (X) this box if you attach a continuation sheet.

9.02 In accordance with the instructions, complete the following table for each activity in which you engage.

[ ]

a. Activity	b. Process Category	c. Yearly Quantity (kg)	d. Total Workers	e. Total Worker-Hours
Manufacture of the listed substance	Enclosed			
	Controlled Release			
	Open			
On-site use as reactant	Enclosed	17,967	10	934
	Controlled Release			
	Open			
On-site use as nonreactant	Enclosed			
	Controlled Release			
	Open			
On-site preparation of products	Enclosed			
	Controlled Release			
	Open			

[ ] Mark (X) this box if you attach a continuation sheet.

9.03 Provide a descriptive job title for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance.

CBI

[ ]

Labor Category	Descriptive Job Title
A	Reactor Operator
B	
C	
D	
E	
F	
G	
H	
I	
J	

[ ] Mark (X) this box if you attach a continuation sheet.

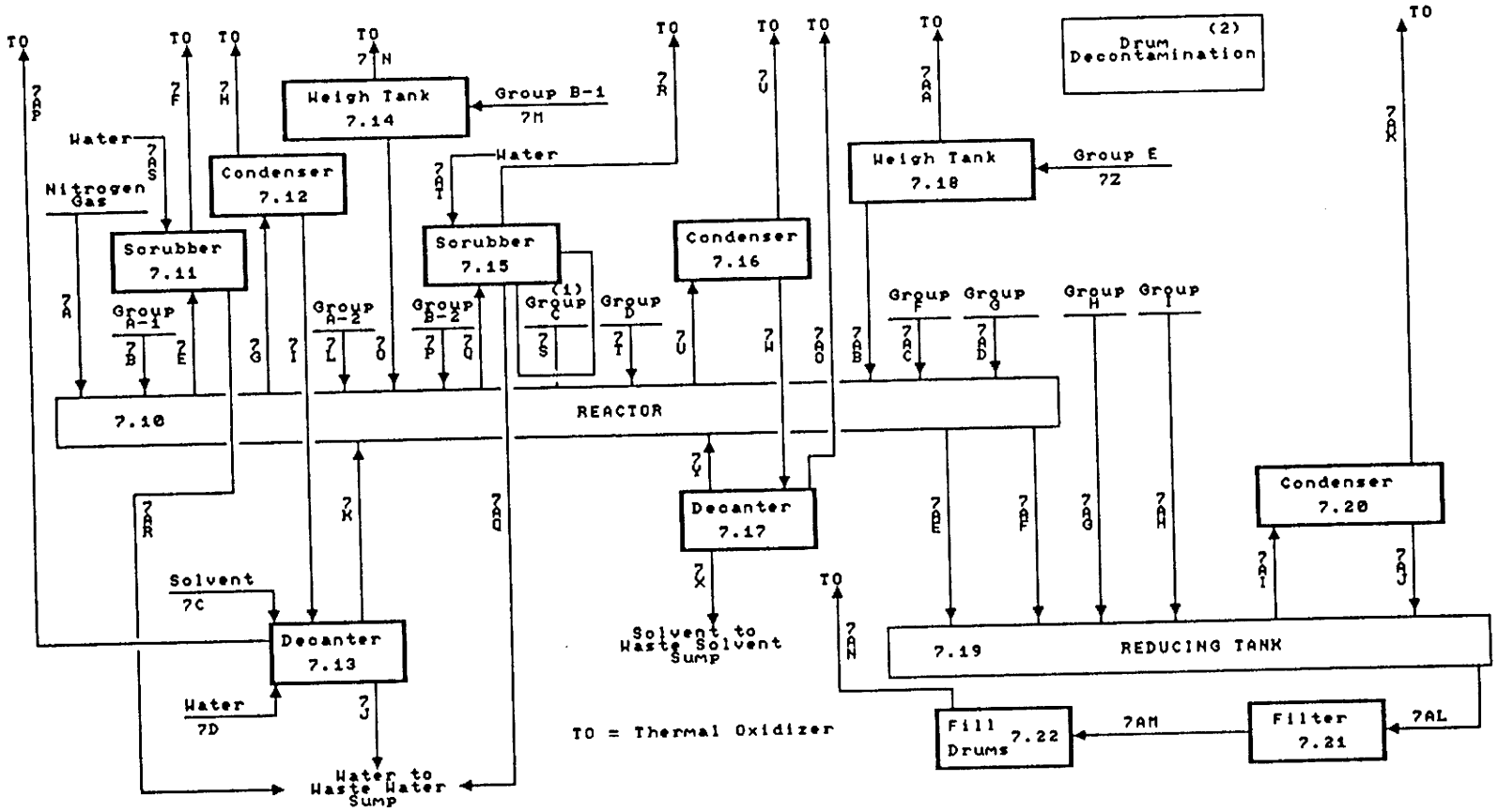
9.04 **In accordance with the instructions, provide your process block flow diagram(s) and indicate associated work areas.**

CBI

[ ] **Process type .....** Batch Copolymerization

See Attached

[X] **Mark (X) this box if you attach a continuation sheet.**


TO
7AP
7F
7H
7N
Weigh Tank
7.14
Group B-1
7M
7R
7U
7AA
Drum Decontamination
(2)
7AX
Water
7AS
Nitrogen Gas
Condenser
7.12
7AT
Water
Weigh Tank
7.18
Group E
7Z
Scrubber
7.11
Scrubber
7.15
Condenser
7.16
7A
Group A-1
7B
7E
7G
7I
Group A-2
7L
7O
Group B-2
7P
7Q
(1)
Group C
7S
Group D
7T
7V
7W
7AO
7AB
Group F
7AC
Group G
7AD
Group H
Group I
7.10
REACTOR
7AR
7K
7AQ
7Y
Decanter
7.17
Condenser
7.20
7AE
7AF
7AG
7AH
7AI
7AJ
Solvent
7C
7X
Solvent to Waste Solvent Sump
TO
7AN
Decanter
7.13
7.19
REDUCING TANK
Water
7D
7J
Water to Waste Water Sump
TO = Thermal Oxidizer
Fill Drums 7.22
7AM
Filter
7.21
7AL

9.05 Describe the various work area(s) shown in question 9.04 that encompass workers who may potentially come in contact with or be exposed to the listed substance. Add any additional areas not shown in the process block flow diagram in question 7.01 or 7.02. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Batch Copolymerization

Work Area ID	Description of Work Areas and Worker Activities
1	3rd Floor K5 Reactor (Workers Charge TDI)
2	Resin Plant Yard (Workers Decontaminate Drums)
3	
4	
5	
6	
7	
8	
9	
10	

[ ] Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Polymerization

Work area 1

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance[1]	Average Length of Exposure Per Day[2]	Number of Days per Year Exposed
A	2	Direct Skin Contact	OL	A	13
A	2	Inhalation	GU	C	13

[1]Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[2]Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours
D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[X] Mark (X) this box if you attach a continuation sheet.

9.06 Complete the following table for each work area identified in question 9.05, and for each labor category at your facility that encompasses workers who may potentially come in contact with or be exposed to the listed substance. Photocopy this question and complete it separately for each process type and work area.

[ ] Process type ..... Batch Copolymerization

Work area 2

Labor Category	Number of Workers Exposed	Mode of Exposure (e.g., direct skin contact)	Physical State of Listed Substance[1]	Average Length of Exposure Per Day[2]	Number of Days per Year Exposed
A	2	Inhalation	GU	B	13

[1]Use the following codes to designate the physical state of the listed substance at the point of exposure:

GC = Gas (condensible at ambient temperature and pressure)
GU = Gas (uncondensible at ambient temperature and pressure; includes fumes, vapors, etc.)
SO = Solid
SY = Sludge or slurry
AL = Aqueous liquid
OL = Organic liquid
IL = Immiscible liquid (specify phases, e.g., 90% water, 10% toluene)

[2]Use the following codes to designate average length of exposure per day:

A = 15 minutes or less
B = Greater than 15 minutes, but not exceeding 1 hour
C = Greater than one hour, but not exceeding 2 hours
D = Greater than 2 hours, but not exceeding 4 hours
E = Greater than 4 hours, but not exceeding 8 hours
F = Greater than 8 hours

[ ] Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 1

Labor Category	8-hour TWA Exposure Level (ppm, mg/m^3, other-specify)	15-Minute Peak Exposure Level (ppm, mg/m^3, other-specify)
A	0.001 ppm	0.005 ppm

[X] Mark (X) this box if you attach a continuation sheet.

9.07 For each labor category represented in question 9.06, indicate the 8-hour Time Weighted Average (TWA) exposure levels and the 15-minute peak exposure levels. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 2

Labor Category	8-hour TWA Exposure Level (ppm, mg/m^3, other-specify)	15-Minute Peak Exposure Level (ppm, mg/m^3, other-specify)
A	N A	N A

[ ] Mark (X) this box if you attach a continuation sheet.

PART B WORK PLACE MONITORING PROGRAM

9.08 If you monitor worker exposure to the listed substance, complete the following table.

CBI

[ ]

Sample/Test	Work Area ID	Testing Frequency (per year)	Number of Samples (per test)	Who Samples[1]	Analyzed In-House (Y/N)	Number of Years Records Maintained
Personal breathing zone	1	1	1	D	Y	Permanent
General work area (air)	1	1	1	D	Y	Permanent
Wipe samples	*	*	*	*	*	*
Adhesive patches	*	*	*	*	*	*
Blood samples	*	*	*	*	*	*
Urine samples	*	*	*	*	*	*
Respiratory samples	*	*	*	*	*	*
Allergy tests	*	*	*	*	*	*
Other (specify) *						
Other (specify) *						
Other (specify) *						

* Not Applicable

[1]Use the following codes to designate who takes the monitoring samples:

A = Plant industrial hygienist
B = Insurance carrier
C = OSHA consultant
D = Other (specify) Plant Industrial Hygiene Sampling Technician

[ ] Mark (X) this box if you attach a continuation sheet.

9.09 For each sample type identified in question 9.08, describe the type of sampling and analytical methodology used for each type of sample.

CBI

[ ]	Sample Type	Sampling and Analytical Methodology
	Personal Breathing Zone (STEL)	Impinger (N-(4-Nitrobenzyl-N-n-propylamine)in Toluene) with HPLC UV Detection
	Gen. Work Area (TLV-TWA)	Impinger (N-(4-Nitrobenzyl-N-n-propylamine)in Toluene) with HPLC UV Detection

9.10 If you conduct personal and/or ambient air monitoring for the listed substance, specify the following information for each equipment type used.

CBI

[ ]	Equipment Type[1]	Detection Limit[2]	Manufacturer	Averaging Time (hr)	Model Number
	D	0.001 (C)	DuPont	0.25	P2500B
	I	0.001 (C)	DuPont	8	P2500B

[1]Use the following codes to designate personal air monitoring equipment types:

A = Passive dosimeter
B = Detector tube
C = Charcoal filtration tube with pump
D = Other (specify) Impinger (N-(4-Nitrobenzyl-N-n-propylamine)in Toluene) with HPLC UV Detector

Use the following codes to designate ambient air monitoring equipment types:

E = Stationary monitors located within work area
F = Stationary monitors located within facility
G = Stationary monitors located at plant boundary
H = Mobile monitoring equipment (specify) _____
I = Other (specify) Impinger(N-(4-Nitrobenzyl-N-n-propylamine)in Toluene); HPLC/UV Detector

[2]Use the following codes to designate detection limit units:

A = ppm
B = Fibers/cubic centimeter (f/cc)
C = Micrograms/cubic meter (μ/m^3)

[ ] Mark (X) this box if you attach a continuation sheet.

9.11 If you conduct routine medical tests for monitoring the health effects of exposure to the listed substance, specify the type and frequency of the tests.

[ ]

Test Description	Frequency (weekly, monthly, yearly, etc.)
Not Applicable	

[ ] Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 1

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgraded
Ventilation:				
Local exhaust	Y	1965	Y	1988
General dilution	Y	1965	N	
Other (specify)				
Vessel emission controls	Y	1976	Y	1985
Mechanical loading or packaging equipment	Y	1965	Y	1988
Other (specify)				

[X] Mark (X) this box if you attach a continuation sheet.

PART C ENGINEERING CONTROLS

9.12 Describe the engineering controls that you use to reduce or eliminate worker exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 2

Engineering Controls	Used (Y/N)	Year Installed	Upgraded (Y/N)	Year Upgraded
Ventilation:				
Local exhaust	N			
General dilution	N			
Other (specify)				
	N			
Vessel emission controls	N			
Mechanical loading or packaging equipment	N			
Other (specify)				
	N			

[ ] Mark (X) this box if you attach a continuation sheet.

9.13 **Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.**

CBI

[ ] **Process type .....** Batch Copolymerization

Work area 1

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
Transfer Enclosure for Drum	N A
Changed from Booth to a	
Bonnet with Localized Exhaust	

[X] **Mark (X) this box if you attach a continuation sheet.**

9.13 **Describe all equipment or process modifications you have made within the 3 years prior to the reporting year that have resulted in a reduction of worker exposure to the listed substance. For each equipment or process modification described, state the percentage reduction in exposure that resulted. Photocopy this question and complete it separately for each process type and work area.**

CBI

[ ] **Process type .....** Batch Copolymerization

Work area 2

Equipment or Process Modification	Reduction in Worker Exposure Per Year (%)
Vessel Emission Control Modification From	N A
Odor Tower to Thermal Oxidizer	

[ ] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 1

Equipment Types	Wear or Use (Y/N)
Respirators	Y
Safety goggles/glasses	Y
Face shields	N
Coveralls	Y
Bib aprons	Y
Chemical-resistant gloves	Y
Other (specify)	

[X] Mark (X) this box if you attach a continuation sheet.

PART D PERSONAL PROTECTIVE AND SAFETY EQUIPMENT

9.14 Describe the personal protective and safety equipment that your workers wear or use in each work area in order to reduce or eliminate their exposure to the listed substance. Photocopy this question and complete it separately for each process type and work area.

CBI

[ ] Process type ..... Batch Copolymerization

Work area 2

Equipment Types	Wear or Use (Y/N)
Respirators	Y
Safety goggles/glasses	Y
Face shields	N
Coveralls	Y
Bib aprons	Y
Chemical-resistant gloves	Y
Other (specify)	

[ ] Mark (X) this box if you attach a continuation sheet.

9.15 If workers use respirators when working with the listed substance, specify for each process type, the work areas where the respirators are used, the type of respirators used, the average usage, whether or not the respirators were fit tested, and the type and frequency of the fit tests. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Batch Copolymerization

Work Area	Respirator Type	Average Usage[1]	Fit Tested (Y/N)	Type of Fit Test[2]	Frequency of Fit Tests (per year)
1	Air Purifying Full-Facepiece	C	Y	QL	1
2	Air Purifying Full-Facepiece	C	Y	QL	1

[1]Use the following codes to designate average usage:

A = Daily
B = Weekly
C = Monthly
D = Once a year
E = Other (specify) _____

[2]Use the following codes to designate the type of fit test:

QL = Qualitative
QT = Quantitative

[ ] Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this CBI question and complete it separately for each process type and work area.

[ ]

Process type ..... Batch Copolymerization

Work area 1

1. Placarding
2. Restrict Access
3. Training Program
4. Respiratory Protection
5. Work Uniform Program
6. Monitoring

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type ..... Batch Copolymerization

Work area 1

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping	X			
Vacuuming				
Water flushing of floors	X			
Other (specify)				
Strip Floor with Industrial Cleaner	X			

[X] Mark (X) this box if you attach a continuation sheet.

PART E WORK PRACTICES

9.19 Describe all of the work practices and administrative controls used to reduce or eliminate worker exposure to the listed substance (e.g., restrict entrance only to authorized workers, mark areas with warning signs, insure worker detection and monitoring practices, provide worker training programs, etc.). Photocopy this question and complete it separately for each process type and work area.

CBI

[ ]

Process type ..... Batch Copolymerization

Work area 2

1. Placarding
2. Restrict Access
3. Training Program
4. Respirratory Protection
5. Work Uniform Program
6. Monitoring

9.20 Indicate (X) how often you perform each housekeeping task used to clean up routine leaks or spills of the listed substance. Photocopy this question and complete it separately for each process type and work area.

Process type ..... Batch Copolymerization

Work area 2

Housekeeping Tasks	Less Than Once Per Day	1-2 Times Per Day	3-4 Times Per Day	More Than 4 Times Per Day
Sweeping				
Vacuuming				
Water flushing of floors				
Other (specify)				

[ ] Mark (X) this box if you attach a continuation sheet.

9.21 Do you have a written medical action plan for responding to routine or emergency exposure to the listed substance?

Routine exposure

Yes 1

No 2

Emergency exposure

Yes 1

No 2

If yes, where are copies of the plan maintained?

Routine exposure: _____

Emergency exposure: _____

9.22 Do you have a written leak and spill cleanup plan that addresses the listed substance? Circle the appropriate response.

(Yes) ..... (1)

No 2

If yes, where are copies of the plan maintained? Superintendant's Office and All Reactor Operators

Has this plan been coordinated with state or local government response organizations? Circle the appropriate response.

Yes 1

(No) ..... (2)

9.23 Who is responsible for monitoring worker safety at your facility? Circle the appropriate response.

Plant safety specialist 1

Insurance carrier 2

OSHA consultant 3

Other (specify) _____ 4

[ ] Mark (X) this box if you attach a continuation sheet.

SECTION 10 ENVIRONMENTAL RELEASE

General Instructions:

Complete Part E (questions 10.23-10.35) for each non-routine release involving the listed substance that occurred during the reporting year. Report on all releases that are equal to or greater than the listed substance's reportable quantity value, RQ, unless the release is federally permitted as defined in 42 U.S.C. 9601, or is specifically excluded under the definition of release as defined in 40 CFR 302.3(22). Reportable quantities are codified in 40 CFR Part 302. If the listed substance is not a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and, thus, does not have an RQ, then report releases that exceed 2,270 kg. If such a substance however, is designated as a CERCLA hazardous substance, then report those releases that are equal to or greater than the RQ. The facility may have answered these questions or similar questions under the Agency's Accidental Release Information Program and may already have this information readily available. Assign a number to each release and use this number throughout this part to identify the release. Releases over more than a 24-hour period are not single releases, i.e., the release of a chemical substance equal to or greater than an RQ must be reported as a separate release for each 24-hour period the release exceeds the RQ.

For questions 10.25-10.35, answer the questions for each release identified in question 10.23. Photocopy these questions and complete them separately for each release.

PART A GENERAL INFORMATION

10.01 Where is your facility located? Circle all appropriate responses.

CBI

[ ] Industrial area 1

Urban area 2

Residential area 3

Agricultural area ..... (4)

Rural area ..... (5)

Adjacent to a park or a recreational area 6

Within 1 mile of a navigable waterway ..... (7)

Within 1 mile of a school, university, hospital, or nursing home facility 8

Within 1 mile of a non-navigable waterway ..... (9)

Other (specify) _____ 10

[ ] Mark (X) this box if you attach a continuation sheet.

10.02 Specify the exact location of your facility (from central point where process unit is located) in terms of latitude and longitude or Universal Transverse Mercader (UTM) coordinates.

Latitude ..... 041 ° 22 ' 20 "

Longitude ..... 082 ° 32 ' 13 "

UTM coordinates ..... Zone UK, Northing UK, Easting UK

10.03 If you monitor meteorological conditions in the vicinity of your facility, provide the following information.

Average annual precipitation ..... _____ inches/year

Predominant wind direction ..... _____

10.04 Indicate the depth to groundwater below your facility.

Depth to groundwater ..... _____ meters

10.05 For each on-site activity listed, indicate (Y/N/NA) all routine releases of the listed substance to the environment. (Refer to the instructions for a definition of Y, N, and NA.)

CBI

[ ]

On-Site Activity	Environmental Release		
	Air	Water	Land
Manufacturing	NA	NA	NA
Importing	NA	NA	NA
Processing	Y	N	N
Otherwise used	NA	NA	NA
Product or residual storage	Y	N	N
Disposal	Y	N	N
Transport	NA	NA	NA

[ ] Mark (X) this box if you attach a continuation sheet.

10.06 **Provide the following information for the listed substance and specify the level of precision for each item. (Refer to the instructions for further explanation and an example.)**

CBI

[ ]

Quantity discharged to the air	2.25	**kg/yr ±**	30 **%**
Quantity discharged in wastewaters	NA	**kg/yr ±**	0 **%**
Quantity managed as other waste in on-site treatment, storage, or disposal units	31.75	**kg/yr ±**	30 **%**
Quantity managed as other waste in off-site treatment, storage, or disposal units	NA	**kg/yr ±**	0 **%**

Air: point source 0.06 lbs
fugitive 4.88 lbs
4.94 lbs

2.245 kg/yr

On-site: drums

39,528 lbs/450 lbs/dr = 88 drums

10 fl. oz./drum X 88 dr ÷ 128 oz./gal = 6.875 gal.

6.875 gal. X 10.163 lbs/gal. ÷ 2.2 lbs/kg = 31.75 kg

[ ] **Mark (X) this box if you attach a continuation sheet.**

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Batch Copolymerization

Stream ID Code	Control Technology	Percent Efficiency
7E	Venturi Scrubber	30
7F	Thermal Oxidation	95
7G	Cooled Water Condenser	80
7H	Thermal Oxidation	95
7N	Thermal Oxidation	95
7Q	Venturi Scrubber	30
7R	Thermal Oxidation	95
7U	Cooled Water Condenser	80
7V	Thermal Oxidation	95
7AA	Thermal Oxidation	95
7AI	Cooled Water Condenser	80
7AK	Thermal Oxidation	95
7AN	Thermal Oxidation	95
7AO	Thermal Oxidation	95
7AP	Thermal Oxidation	95

[ ] Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Residual Treatment Flow Diagram

Stream ID Code	Control Technology	Percent Efficiency
8F	Thermal Oxidation	95
8G	Cooled Water Condenser	80
8L	Thermal Oxidation	95
8Q	Thermal Oxidation	95
8S	Thermal Oxidation	95
8Y	Cooled Water Condenser	80
8AA	Thermal Oxidation	95
8AB	Thermal Oxidation	95
8AD	Thermal Oxidation	95
8AE	Thermal Oxidation	95

[ ] Mark (X) this box if you attach a continuation sheet.

10.08 Describe the control technologies used to minimize release of the listed substance for each process stream containing the listed substance as identified in your process block or residual treatment block flow diagram(s). Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Residual Treatment Flow Diagram

Stream ID Code	Control Technology	Percent Efficiency
8AJ	Thermal Oxidation	95
8AK	Thermal Oxidation	95

[ ] Mark (X) this box if you attach a continuation sheet.

PART B RELEASE TO AIR

10.09 Point Source Emissions -- Identify each emission point source containing the listed substance in terms of a Stream ID Code as identified in your process block or residual treatment block flow diagram(s), and provide a description of each point source. Do not include raw material and product storage vents, or fugitive emission sources (e.g., equipment leaks). Photocopy this question and complete it separately for each process type.

CBI
[ ]

Process type ..... Batch Copolymerization

Point Source ID Code	Description of Emission Point Source
8AN	Thermal Oxidizer Exhaust Vent

[ ] Mark (X) this box if you attach a continuation sheet.

[ ] Mark (X) this box if you attach a continuation sheet.

10.10 Emission Characteristics - - Characterize the emissions for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ]

Point Source ID Code	Physical State[1]	Average Emissions (kg/day)	Frequency[2] (days/yr)	Duration[3] (min/day)	Average Emission Factor[4]	Maximum Emission Rate (kg/min)	Maximum Emission Rate Frequency (events/yr)	Maximum Emission Rate Duration (min/event)
8AN	G	.18	13.8	1440	1.7×10^{-5}	.001	13	30

[1]Use the following codes to designate physical state at the point of release:
G = Gas; V = Vapor; P = Particulate; A = Aerosol; O = Other (specify) _____

[2]Frequency of emission at any level of emission

[3]Duration of emission at any level of emission

[4]Average Emission Factor — Provide estimated (± 25 percent) emission factor (kg of emission per kg of production of listed substance)

10.11 Stack Parameters -- Identify the stack parameters for each Point Source ID Code identified in question 10.09 by completing the following table.

CBI

[ ]

Point Source ID Code	Stack Height(m)	Stack Inner Diameter (at outlet) (m)	Exhaust Temperature (°C)	Emission Exit Velocity (m/sec)	Building Height(m)[1]	Building Width(m)[2]	Vent Type[3]
8AN	9.3 m	.77 m	315-400°C	3.38 m/sec	7.7 m	10.8 m	V

[1]Height of attached or adjacent building

[2]Width of attached or adjacent building

[3]Use the following codes to designate vent type:

H = Horizontal
V = Vertical

[ ] Mark (X) this box if you attach a continuation sheet.

10.12 If the listed substance is emitted in particulate form, indicate the particle size distribution for each Point Source ID Code identified in question 10.09. Photocopy this question and complete it separately for each emission point source.

CBI

[ ]

Point source ID code ..... NA

Size Range (microns)	Mass Fraction (% ± % precision)
< 1	
≥ 1 to < 10	
≥ 10 to < 30	
≥ 30 to < 50	
≥ 50 to < 100	
≥ 100 to < 500	
≥ 500	
	Total = 100%

No particulate emissions

[ ] Mark (X) this box if you attach a continuation sheet.

PART C FUGITIVE EMISSIONS

10.13 Equipment Leaks -- Complete the following table by providing the number of equipment types listed which are exposed to the listed substance and which are in service according to the specified weight percent of the listed substance passing through the component. Do this for each process type identified in your process block or residual treatment block flow diagram(s). Do not include equipment types that are not exposed to the listed substance. If this is a batch or intermittently operated process, give an overall percentage of time per year that the process type is exposed to the listed substance. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... Batch Copolymerization

Percentage of time per year that the listed substance is exposed to this process type ..... 2 %

Equipment Type	Number of Components in Service by Weight Percent of Listed Substance in Process Stream					
	Less than 5%	5-10%	11-25%	26-75%	76-99%	Greater than 99%
Pump seals[1]						
Packed	NA	NA	NA	NA	NA	1
Mechanical						0
Double mechanical[2]						0
Compressor seals[1]						0
Flanges						0
Valves						
Gas[3]						0
Liquid						2
Pressure relief devices[4] (Gas or vapor only)						0
Sample connections						
Gas						0
Liquid						0
Open-ended lines[5] (e.g., purge, vent)						
Gas						0
Liquid						0

[1]List the number of pump and compressor seals, rather than the number of pumps or compressors

10.13 continued on next page

[ ] Mark (X) this box if you attach a continuation sheet.

10.13 (continued)

[2]If double mechanical seals are operated with the barrier (B) fluid at a pressure greater than the pump stuffing box pressure and/or equipped with a sensor (S) that will detect failure of the seal system, the barrier fluid system, or both, indicate with a "B" and/or an "S", respectively

[3]Conditions existing in the valve during normal operation

[4]Report all pressure relief devices in service, including those equipped with control devices

[5]Lines closed during normal operation that would be used during maintenance operations

10.14 Pressure Relief Devices with Controls -- Complete the following table for those pressure relief devices identified in 10.13 to indicate which pressure relief devices in service are controlled. If a pressure relief device is not controlled, enter "None" under column c.

CBI

[ ]

a. Number of Pressure Relief Devices	b. Percent Chemical in Vessel[1]	c. Control Device	d. Estimated Control Efficiency[2]
None			

[1]Refer to the table in question 10.13 and record the percent range given under the heading entitled "Number of Components in Service by Weight Percent of Listed Substance" (e.g., <5%, 5-10%, 11-25%, etc.)

[2]The EPA assigns a control efficiency of 100 percent for equipment leaks controlled with rupture discs under normal operating conditions. The EPA assigns a control efficiency of 98 percent for emissions routed to a flare under normal operating conditions

[ ] Mark (X) this box if you attach a continuation sheet.

10.15 Equipment Leak Detection -- If a formal leak detection and repair program is in place, complete the following table regarding those leak detection and repair procedures. Photocopy this question and complete it separately for each process type.

CBI

[ ] Process type ..... NA

Equipment Type	Leak Detection Concentration (ppm or mg/m^3) Measured at ____ Inches from Source	Detection Device[1]	Frequency of Leak Detection (per year)	Repairs Initiated (days after detection)	Repairs Completed (days after initiated)
Pump seals					
Packed					
Mechanical					
Double mechanical					
Compressor seals					
Flanges					
Valves					
Gas					
Liquid					
Pressure relief devices (gas or vapor only)					
Sample connections					
Gas					
Liquid					
Open-ended lines					
Gas					
Liquid					

[1]Use the following codes to designate detection device:

POVA = Portable organic vapor analyzer
FPM = Fixed point monitoring
O = Other (specify) _____

[ ] Mark (X) this box if you attach a continuation sheet.

[ ] Mark (X) this box if you attach a continuation sheet.

10.16 Raw Material, Intermediate and Product Storage Emissions - - Complete the following table by providing the information on each liquid raw material, intermediate, and product storage vessel containing the listed substance as identified in your process block or residual treatment block flow diagram(s).

CBI

[ ]

Vessel Type[1]	Floating Roof Seals[2]	Composition of Stored Materials[3]	Throughput (liters per year)	Vessel Filling Rate (gpm)	Vessel Filling Duration (min)	Vessel Inner Diameter (m)	Vessel Height (m)	Operating Vessel Volume (l)	Vessel Emission Controls[4]	Design Flow Rate[5]	Vent Diameter (cm)	Control Efficiency (%)	Basis for Estimate[6]
NA													

[1]Use the following codes to designate vessel type:

F = Fixed roof
CIF = Contact internal floating roof
NCIF = Noncontact internal floating roof
EFR = External floating roof
P = Pressure vessel (indicate pressure rating)
H = Horizontal
U = Underground

[2]Use the following codes to designate floating roof seals:

MS1 = Mechanical shoe, primary
MS2 = Shoe-mounted secondary
MS2R = Rim-mounted, secondary
LM1 = Liquid-mounted resilient filled seal, primary
LM2 = Rim-mounted shield
LMW = Weather shield
VM1 = Vapor mounted resilient filled seal, primary
VM2 = Rim-mounted secondary
VMW = Weather shield

[3]Indicate weight percent of the listed substance. Include the total volatile organic content in parenthesis

[4]Other than floating roofs

[5]Gas/vapor flow rate the emission control device was designed to handle (specify flow rate units)

[6]Use the following codes to designate basis for estimate of control efficiency:

C = Calculations
S = Sampling

PART E NON-ROUTINE RELEASES

10.23 Indicate the date and time when the release occurred and when the release ceased or was stopped. If there were more than six releases, attach a continuation sheet and list all releases.

Release	Date Started	Time (am/pm)	Date Stopped	Time (am/pm)
1	None			
2	NA			
3	NA			
4	NA			
5	NA			
6	NA			

10.24 Specify the weather conditions at the time of each release.

Release	Wind Speed (km/hr)	Wind Direction	Humidity (%)	Temperature (°C)	Precipitation (Y/N)
1					
2					
3					
4					
5					
6					

[ ] Mark (X) this box if you attach a continuation sheet.